

specifics; and Group II, claims 65-145, drawn to a wavelength division system having a diffraction grating. Applicants respectfully traverse the restriction requirement based upon the following.

It is stated in the Office Action that Group I and Group II are related as combination and subcombination. With respect to the relationship between combination claims and subcombination claims, two-way distinctness must be demonstrated in order for a restriction to be proper (MPEP 806.05(c)). Combination and subcombination inventions are distinct if it can be shown that 1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and 2) the subcombination can be shown to have utility either by itself or in other and different relations.

With respect to item 1, it is contended in the Office Action that claim 65, a Group II claim, shows that the combination does not rely upon the details of the subcombination (diffraction grating) for patentability. On the contrary, claim 65 clearly relies upon the details of the subcombination for patentability. Claim 65 recites a wavelength division device, comprising first coupling components for supporting a plurality of signal carriers, a second coupling component for supporting a signal carrier, and a diffraction grating in optical communication with the signal carriers coupled to the first and

second coupling components so as to diffract input optical rays over a wavelength range of at least approximately 30nm in which the wavelength division device is substantially polarization insensitive. Without the recital of the particulars of the diffraction grating, the claimed wavelength division device merely recites coupling components for holding signal carriers. Without question, claim 65 relies upon the details of the subcombination diffraction grating (substantially polarization insensitivity over a 30nm wavelength range) for patentability.

Other claims in Group II also require the particulars of the subcombination. For instance, method claim 79 recites a method including receiving one or more optical signals; *diffracting the received one or more signals into a plurality of output optical signals, each output optical signal being diffracted within a wavelength range of at least 30nm and having polarization states whose power levels are substantially the same as power levels of corresponding polarization states of the one or more received optical signals*; and coupling each output optical signal onto a distinct carrier. Applicants respectfully submit that without the particulars of the step of diffracting, the method reduces to receiving input signals and coupling output signals to a distinct carrier, which hardly provides reasons for patentability. Clearly, claim 79 relies upon the details of the subcombination diffracting for patentability.

Relatedly, Group II claim 90 recites a wavelength division device include a means for receiving one or more optical signals; *means for diffracting the received one or more signals into a plurality of output optical signals, each output optical signal being diffracted within a wavelength range of at least 30nm and having polarization states whose power levels are substantially the same as power levels of corresponding polarization states of the one or more received optical signals;* and a means for coupling each output optical signal onto a distinct carrier. It is clear that without the means for diffracting claim limitation, the claim merely recites receiving means and coupling means, which cannot alone be mistaken for patentable features. As a result, claim 90 relies upon the details of the subcombination diffracting means for patentability.

Based upon the foregoing, it is clear that item 1), the requirement that the combination as claimed does not require the particulars of the subcombination, has not been met.

With respect to item 2), that the subcombination has utility by itself, it is contended in the Office Action that the claimed subcombination has a separate utility as a decorative display device (see p. 2 of the Office Action). Applicants respectfully submit that there is no support for the Group I claims being a decorative display device. In fact, there is

support for the contrary. In particular, it is stated in the Office Action that Claims 2-64 are classified in class 359, subclass 569. Class 359 is directed to optics systems and elements. Subclass 569 is directed to the diffraction grating having one or more particular structural characteristics, such as thickness, shape, line spacing, aspect ratio, etc. It is noted that the Group I claims are not classified in subclass 567 (for ornamental effect or display) or in a design classification directed to the ornamental appearance of an object. There is no mention in the application of the diffraction grating being used as a decorative display device.

Based upon the foregoing, Applicants respectfully submit that there is insufficient showing in the Office Action that item 2) of the requirement has been met.

In an absence of a sufficient showing for restricting the prosecution of the present application to claims of either Group I or Group II, Applicants respectfully submit that the present application not be so restricted.

In the event that the Examiner somehow makes the restriction requirement final as between the claims of Group I and Group II, Applicants respectfully elect the claims of Group I for prosecution in the present application.

Further, the present application is restricted to the following patentably distinct species of the claimed invention:

(1) sinusoidal grating and (2) blazed grating. In the event a blazed grating is elected for prosecution, a further election of sub-species is required. Specifically, the sub-species are further identified by the size of the blaze angle: (w) 27-39 degrees; (x) 41-44 degrees; (y) 50-56 degrees and (z) 68-76 degrees. Assuming that sub-species (w) includes blaze angles 27-40 instead of 27-39,¹ Applicants elect sub-species (w) for prosecution in the present application.

Assuming that the restriction as between the claims of Group I and Group II will be withdrawn for the reasons presented above, it is believed that claims 1-34, 65-100 and 132-145 may be generic as encompassing a number of the identified sub-species, and claims 35-39, 46-50, 101-105 and 112-116 may be directed to the elected sub-species (w).

It is believed that this application is now in a condition for allowance, and such a Notice is requested. Favorable consideration is respectfully requested.

¹ Applicants note that if sub-species (w) is intended to encompass blaze angles between 27 and 39 degrees, embodiment C (a blazed grating embodiment, see the Table appearing on p. 19 of the application) described in the application does not appear to fall into any identified sub-species.

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Respectfully submitted,

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